

# Depression indicators in a national sample of older community and care home patients: applying the Quality and Outcomes Framework

Tess Harris, Sunil M Shah, Iain M Carey, Stephen DeWilde and Derek G Cook

## ABSTRACT

In a national primary care database sample of older people ( $\geq 65$  years), 81% (83 588/103 821) of community and 58% (1702/2940) of care home residents with diabetes or heart disease had depression case finding recently recorded; 66% (1418/2145) of community and 22% (26/118) of care home residents with a new depression episode had a depression-severity assessment recorded. Age, sex, and higher care home dementia prevalence did not explain these differences. Case finding and assessment of depression need to be improved in older people, particularly care home residents.

### Keywords

depression; homes for the aged; elderly; quality indicators, health care.

## INTRODUCTION

Depression is common and often under-recognised in older people, particularly care home residents (living in nursing and residential homes), and is associated with chronic physical health problems.<sup>1</sup> The importance of detecting depression in adults with physical health problems has been recognised by the UK Quality and Outcomes Framework (QOF), which rewards GPs for depression case finding (using two simple questions) in patients with diabetes or ischaemic heart disease.<sup>2</sup> Case finding for depression was recorded in 88% of all such cases across UK practices in 2008–2009.<sup>3</sup> However, no information is available on older people generally, or on those living in care homes.

Antidepressant medication and psychological therapies both have strong evidence for efficacy in older people.<sup>4</sup> They are recommended in combination for moderate or severe depression for adults with and without chronic physical health problems,<sup>5,6</sup> older adults,<sup>7</sup> and care home residents.<sup>8</sup> Antidepressant drugs are not recommended as a first-line treatment for mild to moderate depression, where psychological therapies are indicated initially.<sup>5,6</sup>

To ensure appropriate antidepressant targeting, depression severity should therefore first be assessed using validated scales.<sup>5–8</sup> The QOF provides incentives for measurement of depression severity at treatment outset, using scales validated in primary care.<sup>2</sup> The three recommended measures have all been successfully used with older primary care patients: the nine-item Patient Health Questionnaire (PHQ-9);<sup>9</sup> the depression subscale of the Hospital Anxiety and Depression Scale (HADS-D);<sup>10</sup> and the Beck Depression Inventory (BDI-II).<sup>11</sup> The HADS-D and a two-item PHQ have also been used successfully in care homes,<sup>12,13</sup> but none of these scales is appropriate in dementia, where specialised scales are recommended.<sup>14</sup>

The objective of this study was to examine the use of case finding for depression and assessment of depression severity in older community and care home patients.

*T Harris, MSc, MD, MRCPG, GP and senior lecturer in primary care; SM Shah, MSc, FFPH, senior lecturer in public health; IM Carey, MSc, PhD, research fellow; S DeWilde, MD, MRCPG, GP and clinical research fellow; DG Cook, MSc, PhD, professor of epidemiology, Division of Population Health Sciences and Education, St George's University of London, London.*

### Address for correspondence

Dr Tess Harris, Division of Population Health Sciences and Education, St George's University of London, Cranmer Terrace, Tooting, London, SW17 0RE. E-mail: [tharris@sgul.ac.uk](mailto:tharris@sgul.ac.uk)

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## How this fits in

GPs are rewarded for case finding for depression in patients with diabetes or ischaemic heart disease and for assessing severity in all new cases of depression. However, little is known about how these indicators perform in older people. This paper shows that older people in general, and those in care homes in particular, are not being screened for depression or having their depression severity assessed as often as younger adults. Differences between older community and care home samples were not explained by age, sex, or dementia prevalence and could be a manifestation of the inverse care law for care home residents.

### METHOD

Data were from used from The Health Improvement Network (THIN) primary care database. A total of 413 646 patients aged  $\geq 65$  years were identified, from 326 English and Welsh practices, who were currently registered on the last day data were provided by the practice: most practices provided data up to February 2009; only practices providing data at least to March 2008 were included. Anonymised patient postcode linkage identified patients living in postcodes that included a nursing or residential home. Care home residents were identified by either a Read Code or multiple markers of care home residence (postcode linkage, household size, consultation location).<sup>15</sup> A total of 403 259 community and 10 387 care home residents aged 65–104 years were included.

The main outcome measures were based on the QOF indicators for: (i) depression case finding in patients with diabetes or ischaemic heart disease; and (ii) assessment of depression severity in patients with a new depression episode (see Tables 1 and 2 for full definitions). QOF Read Codes were used in both cases,<sup>2</sup> but no account was taken of exceptions recorded by GPs, as these may bias comparisons between community and care home samples. Exclusions were also applied consistently to both numerator and denominator when calculating achievement of the standards. In addition, 'QOF-equivalent' figures were calculated (Table 1) to allow direct comparison with national QOF findings.

Direct standardisation to the combined care home population in 5-year age and sex bands was used to compare community with care home rates. Confidence intervals (CIs) were calculated taking account of practice clustering, using a robust cluster variance estimate.

### RESULTS

Depression screening was recorded in the last 15 months for 80.5% (95% CI = 79.3 to 81.8%) of community and 57.9% (95% CI = 54.0 to 61.8%) of care home residents with diabetes or ischaemic heart disease. Increasing age was associated with decreased screening in both settings. After exclusion of patients with dementia, the age- and sex-

**Table 1. Recent case finding for depression in patients with ischaemic heart disease or diabetes aged  $\geq 65$  years and no recent recorded depression, living in the community and in care homes ( $n = 413\,646$ ).**

	Community ( $n = 403\,259$ )			Care homes ( $n = 10\,387$ )		
	<i>n</i>	%	95% CI	<i>n</i>	%	95% CI
Patients with ischaemic heart disease or diabetes and no recent depression <sup>a</sup>	103 821	100	–	2940	100	–
Number with case finding for depression in last 15 months <sup>b</sup>	83 588	80.5	79.3 to 81.8	1702	57.9	54.0 to 61.8
% standardised to overall care home population <sup>c,d</sup>	–	73.7	71.9 to 75.4	–	57.5	53.6 to 61.4
Patients as above <sup>a</sup> but no dementia <sup>e</sup> ever	101 814	100	–	1795	100	–
Number with case finding for depression in last 15 months <sup>b</sup>	82 137	80.7	79.3 to 81.9	1101	61.3	57.2 to 65.4
% standardised to overall care home population <sup>c,d</sup>	–	74.0	72.3 to 75.8	–	61.1	57.0 to 65.1
Sex and age						
Females aged 65–74 years	19 106	81.0	79.7 to 82.3	77	75.3	65.3 to 85.3
Females aged 75–84 years	19 162	79.6	78.3 to 81.0	355	62.8	57.0 to 68.6
Females aged 85–104 years	7691	71.1	69.0 to 73.2	827	56.8	51.8 to 61.9
Males aged 65–74 years	29 041	82.5	81.3 to 83.8	98	69.4	60.3 to 78.4
Males aged 75–84 years	21 473	82.9	81.5 to 84.2	227	65.6	59.0 to 72.3
Males aged 85–104 years	5341	78.1	76.2 to 79.9	211	63.0	56.1 to 70.0
Patients based on QOF-equivalent calculation <sup>f</sup>	104 593	100	–	2680	100	–
Number with case finding for depression in last 15 months <sup>b</sup>	85 198	81.5	80.2 to 82.7	1736	64.8	61.1 to 68.4
% standardised to overall care home population <sup>c,d</sup>	–	75.2	73.6 to 76.9	–	64.3	60.7 to 68.0

<sup>a</sup>Patients registered for at least 90 days, with a code of diabetes or ischaemic heart disease ever, at least 90 days from the end of follow-up and no new depression episode in the last 15 months. <sup>b</sup>Case finding for depression based on two standard screening questions being recorded. <sup>c</sup>Standardisation was for age in 5-year bands and sex using direct standardisation to the care home population; 95% CIs allow for clustering by practice. <sup>d</sup>All standardised community and care home differences are significant at  $P < 0.001$ . <sup>e</sup>Dementia diagnosis was based on Read Codes used in the QOF,<sup>2</sup> with additional codes for cognitive decline. <sup>f</sup>QOF calculation differs from <sup>a</sup> by including patients with recent case finding for depression in the denominator regardless of exclusion criteria. QOF = Quality and Outcomes Framework.

**Table 2. Assessment of severity in new depression episodes in primary care patients aged  $\geq 65$  years living in the community and in care homes ( $n = 413\ 646$ ).**

	Community ( $n = 403\ 259$ )			Care homes ( $n = 10\ 387$ )		
	<i>n</i>	%	95% CI	<i>n</i>	%	95% CI
Patients with new episode of depression <sup>a</sup>	2145	100	–	118	100	–
Number with assessment of severity within 28 days <sup>b</sup>	1418	66.1	62.9 to 69.3	26	22.0	14.0 to 30.1
% standardised to overall care home population <sup>c,d</sup>	–	55.0	47.8 to 62.2	–	22.6	15.1 to 30.2
Patients as above <sup>a</sup> with no dementia <sup>e</sup> ever	2076	100	–	79	100	–
Number with assessment of severity within 28 days <sup>b</sup>	1389	66.9	63.7 to 70.2	20	25.3	15.4 to 35.2
% standardised to overall care home population <sup>c,d</sup>	–	56.3	49.1 to 63.5	–	26.5	17.0 to 36.0
Patients based on QOF-equivalent calculation <sup>f</sup>	2617	100	–	121	100	–
Number with assessment of severity within 28 days <sup>b</sup>	1922	73.4	70.6 to 76.3	36	29.8	21.1 to 38.4
% standardised to overall care home population <sup>c,d</sup>	–	63.2	56.2 to 70.1	–	30.1	22.0 to 38.1

<sup>a</sup>Patients registered for at least 90 days with a new diagnosis of depression in period 91–450 days from end of follow-up and no depression severity assessment >365 days before end of follow-up. <sup>b</sup>Depression severity assessment using an assessment tool validated for use in primary care. <sup>c</sup>Standardisation was for age in 5-year bands and sex using direct standardisation to the care home population, 95% CIs allow for clustering by practice. <sup>d</sup>All standardised community and care home differences are significant at  $P < 0.001$ . <sup>e</sup>Dementia diagnosis was based on Read Codes used in QOF<sup>2</sup> with additional codes for cognitive decline. <sup>f</sup>QOF calculation differs from <sup>a</sup> by including patients with depression severity assessment within 28 days in denominator regardless of exclusion criteria.

standardised screening rates were 74.0% in the community and 61.1% in care homes (Table 1).

An assessment of depression severity was recorded in 66.1% (95% CI = 62.9 to 69.3%) of community and 22.0% (95% CI = 14.0 to 30.1%) of care home residents with a new depression episode. This difference in rates persisted after exclusion of patients with dementia and age and sex adjustment (56.3% in community and 26.5% in care homes; Table 2).

## DISCUSSION

### Summary of main findings

Older care home patients with diabetes or ischaemic heart disease are less likely to have case finding for depression than community patients, and the oldest age groups are less likely to be screened in both settings. Care home patients with new depression episodes are less likely to have a depression-severity measure recorded than community patients. The differences in performance of these QOF depression indicators between community and care homes are not explained by age and sex differences or by the greater dementia prevalence in care homes. Given the higher risk of depression in care homes, the differences in performance of these QOF depression indicators may be a manifestation of inverse care for care home residents.

### Strengths and limitations of the study

This is the first nationally representative study to examine the performance of the QOF depression indicators in older people. The novel methodology allows separate identification of care home residents, which has not previously been possible in large UK samples. Measurement of the first indicator (depression case finding in patients with diabetes or

ischaemic heart disease) is potentially biased by shorter registration times for care home patients, because of rapid patient turnover; but limiting the analysis to patients registered for 15 months in both settings made very little difference to the results (not shown). A potential weakness of the data is reliance on the quality of routine recording, but the variables used are likely to be well recorded, as these definitions are used to determine practice payments.

### Comparison with existing literature

The finding in this study of a QOF-equivalent estimate of 82% for depression case finding for older people with diabetes or heart disease in the community was lower than the value of 88% recorded for all-age adults across UK practices in 2007–2008 and 2008–2009.<sup>3</sup> Combined with the finding that screening likelihood decreased with increasing age for both samples, this suggests that for GPs, age is an important barrier to using the screening tests.

Similarly, the study's QOF-equivalent estimate of 73% for assessment of depression severity for older people in the community was lower than the published attainment of 91% and 92% of adults in 2007–2008 and 2008–2009 respectively.<sup>3</sup> This suggests that depression severity is less frequently recorded in older people, despite these measures having been successfully used with older people in primary care.<sup>9–11</sup>

Kendrick *et al* demonstrated that even when depression severity is recorded in older people, these patients are less likely to be started on antidepressant medication or referred.<sup>16</sup> However, the findings of the present study worryingly suggest that older people are even less likely to receive appropriate

management when diagnosed with depression.

The severity-assessment scales recommended by the QOF are not appropriate in dementia, but even after excluding patients with dementia, there was evidence of their use in only 25% of care home patients.

Possible reasons for their low use in care homes include the following: practical difficulties in accessing the instruments or in remembering to use them when out of the surgery; concerns about possible undiagnosed dementia or the presence of other diseases making assessment difficult (for example, deafness, dysphasia); and a belief that severity assessment may not affect treatment (for example, if alternatives to medication are difficult to access for this population). Enabling access to computerised records with clinical prompts in care homes could address at least some of the practical barriers. Alternatively, there is evidence that GPs are sceptical about the value of depression-severity-assessment scores compared to clinical judgement,<sup>17</sup> and this may lead to their omission in patients for whom administration may be perceived as difficult or where psychological therapies are not accessible, such as care home residents.

#### Implications for clinical practice

The study findings suggest that older people in general, and those in care homes in particular, are not being screened for depression in the presence of diabetes or ischaemic heart disease or having their depression severity assessed as often as younger adults. GPs need to consider improving their attainment of these depression indicators in older people, particularly for those living in care homes, as they are at markedly increased risk of depression.

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#### Ethical approval

The study was approved by the South-East Multicentre Research Ethics Committee (study reference: 08/H1102/33).

#### Competing interests

The authors have stated that there are none.

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